

Single Session Effects of Treatment Components Within a Specialized Inpatient Posttraumatic Stress Disorder Program

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This study examined the potential contributions of individual treatment components within one inpatient posttraumatic stress disorders (PTSD) program. Fifteen treatment components were assessed by a self-report instrument administered to a cohort of veterans just before and immediately after each session approximately halfway through the program. Components with an external focus, action modality, and, secondarily, little Vietnam content were associated with more improvement than components with an internal focus, verbal modality, or high Vietnam content. Improvement was greatest in veterans with fewer PTSD symptoms. Short-term improvement was not correlated with veterans' ratings at discharge of component effectiveness. These results were later confirmed on a second cohort. This study supports the potential roles of distraction and physical release, as opposed to exploratory verbal discussion, in the treatment of chronic combat-related PTSD.

KEY WORDS: PTSD; treatment; inpatient; group therapy.

Over the past 15 years, the Department of Veterans' Affairs has developed specialized inpatient posttraumatic stress disorder (PTSD) programs (SIPUs) devoted to the treatment of war zone veterans (Chief Medical Director's Committee on PTSD, 1991). These SIPU programs were intentionally designed as intensive, long term treatment programs (Scurfield,

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Kenderdine, & Pollard, 1990). Longer lengths of stay were established (e.g., 2 or 3 months vs. 2 or 3 weeks) to allow veterans time to uncover and process their war zone memories within a supportive, milieu therapy environment. A number of these programs have been described in some detail in the clinical literature (Arnold, 1985; Berman, Price, & Gusman, 1982; Chief Medical Director's Committee on PTSD, 1991; Johnson, Feldman, Southwick, & Charney, 1994; Silver, 1986). In a comprehensive survey comparing these programs to general psychiatric units, Johnson, Rosenheck, and Fontana (1997, see this Section) found them to be characterized by strict selection criteria, longer lengths of stay (mean days = 63 (SIPU); 34 (GPU)), intensive treatment (mean hours per week = 29 (SIPU); 13 (GPU)), and highly active treatment environment as measured by Moos' (1988) Community Oriented Program Environment Scale, in comparison with matched general psychiatric units in the same medical centers.

The design, implementation, and evaluation of SIPUs pose significant challenges due to the complexity of these environments. Outcome studies examining the overall effect of such units have generally indicated some symptomatic improvement at discharge, but often a return to baseline levels at follow-up (Hammarberg & Silver, 1994; Johnson et al., 1996; Perconte, 1989; Scurfield, Kenderdine, & Pollard, 1990). Such global assessment strategies avoid the problem of identifying unique contributions of each treatment component within the program. It is difficult to conceptualize how patients are able to successfully integrate 20–30 different types of intervention each week. It is possible that the effects of each intervention are not additive, but rather may interfere with each other due to differences in format, theoretical orientation, or therapist style. The overall integrity and cohesiveness of the treatment environment, determined more by general management and structural dimensions than by program content, may also have a significant impact on the final outcome (Moos, 1973).

Though design of SIPU programs requires the ability to integrate a complex arrangement of staff and patient schedules, a rational sequencing of treatment components, and management of numerous procedures and regulations, no study has provided empirical evidence of the relative effectiveness of one design over another, or of different types of treatment components.

Though measuring the overall efficacy of these programs is a primary research objective, presumably it is also important to know which types of therapeutic components have the greatest efficacy, on what functional dimensions, and with which types of patients. Empirical study of these questions will therefore require a method to categorize component type, perhaps through dimensions of structure, content, or style. Appropriate outcome measures need to be identified: For example, short term effects

of individual components are most likely to affect a participant's mood and psychological state, rather than family relationships or employment. Important patient factors might include severity of PTSD symptomatology or level of combat exposure.

Only two studies have examined the specific effects of unique treatment components within these milieus. Boudewyns, Hyer, Woods, Harrison, and McCranie (1990) examined the specific effects of a direct therapeutic exposure component by providing it to half of an inpatient sample and then comparing self-report ratings of program effectiveness at discharge and at 3-month follow-up. Veterans receiving the exposure treatment reported higher levels of satisfaction with the program. Silver, Brooks, and Obenchain (1995) compared the effects of additional treatment components (i.e., Eye Movement Desensitization and Reprocessing, biofeedback, or relaxation training) among 28 inpatient veterans and found veterans receiving EMDR reported greater overall improvement at discharge than 55 control patients who did not receive the optional treatments.

Most SIPUs include treatment components that attempt to direct the veterans' attention toward their internal affects and thought processes through exploratory, insight-oriented interventions that typically encourage the veterans to reflect on their past lives and current behavior. However, other treatment components are included that, in contrast, direct the veterans' attention outward toward other people and external tasks, often in behaviorally-oriented approaches that help the veteran practice new coping and prosocial behaviors. Differences between exploratory and rehabilitative therapies roughly parallel these distinctions. It is not known whether veterans respond differently to these types of approaches.

Presumably the therapeutic effects occasioned by a particular group will be the strongest immediately after the session. Though integration and processing of the group may continue for hours or days, and the full effect of learning may not be realized until put into practice after discharge, nevertheless the moment at the end of the session will be least confounded by other influences. On the other hand, certain emotionally intense groups may leave patients upset or distressed at the end of the session, as a result of their involvement, risk-taking, catharsis, or learning, which may nevertheless eventually result in clinical improvement. Therefore interpretation of short-term effects must be clearly differentiated from long term outcome.

Patients differing in severity of traumatic experiences and PTSD symptomatology have been treated in these programs, despite the fact that they may require quite different treatment approaches. Though the clinical literature suggests that more severely impaired PTSD patients may require more supportive, even distracting treatments, in contrast to exposure-based

or introspective treatments, no study to date has examined this issue (Herman, 1992).

In this preliminary study, the immediate effects on the veterans' psychological states were measured before and after sessions of the major treatment components on one SIPU. The aim was to reveal significant patterns of response among the veterans, within various categorizations of components as well as between subgroups differing in severity of PTSD symptomatology. Such patterns, if identified, may possibly suggest lines of further inquiry regarding effective treatment interventions with this population.

Method

Subjects

Subjects included 12 Vietnam combat veterans participating as a cohort in the SIPU program during December, 1991, and 13 veterans in a second cohort during May, 1992. This sample was independent of that used in a previous study (Johnson et al., 1996). Demographics included mean age (40.2 years), race (84% White), marital status (40% married), and employment (32% employed).

Design

Fifteen major treatment components offered during a 16-week cohort-based treatment program were assessed by a self-report instrument administered to all 12 veterans just before and immediately after each session during a 2-week period approximately half way through the program. Changes in feeling states occurring over the course of each session were examined across components and correlated with PTSD symptom measures previously administered upon admission. Data were then compared with veterans' ratings at discharge of effectiveness of each treatment component. The results from this initial evaluation were then replicated on a second cohort of 13 veterans 6 months later, in order to test the consistency of the relationship among the study variables.

Setting

This study was conducted on a multidisciplinary, specialized inpatient treatment program (SIPU) for Vietnam veterans. Veterans were admitted

in cohorts of 14 every 4 months for a 16-week program. Rigorous screening procedures were employed prior to admission to identify veterans with PTSD, based on DSM-III-R criteria, through clinical interviews and review of medical records. Combat experience was confirmed by review of their military files. Generally, veterans were required to have achieved a degree of stability in both their symptoms (e.g., no suicidal ideation for 60 days, sobriety for 90 days), social functioning (e.g., established living arrangement, family involvement in program), and previous outpatient treatment. Because the program was over-subscribed, veterans waited 4 months on average before being admitted. Written informed consent was obtained from each patient after all the procedures were fully explained. Upon admission, most patients were removed from medications in order to assess their baseline clinical state and then to participate in a number of neuropsychiatric, psychophysiological, and psychological studies.

The treatment program aimed to facilitate the reintegration of the Vietnam veteran back into American society, his family, and veterans groups (Johnson et al., 1994). The program consisted of three phases. The first phase prepared the veteran to examine his traumatic experiences through relaxation, sleep, and anger management training, and allowed the staff to conduct a fairly extensive review of his life and illness. Creative arts therapies were used to increase his expressiveness and comfort with emotion. The second phase focused on review of the traumas in both group and individual therapy, and then employment of cognitive restructuring techniques to alter the veteran's attitudes toward them. The aim was to make the veteran aware of the degree to which he continued to live in the past, and to redirect his attention toward meaningful relationships and activities in the present. The third phase focused on engagement with the community, family therapy, and planning for the future. Volunteer service in community agencies as well as family meetings provided opportunities for the veteran to work on his relationships with people other than his veteran cohort. During each week patients attended approximately 32 hr of mandatory groups and several hours of individual therapy, conducted within a tightly structured schedule.

Comparison of the treatment program with other SIPUs was made possible by a national survey of SIPUs, which assessed each treatment modality offered in these programs by method and content area (Fontana, Rosenheck, & Spencer, 1993). Time spent in various treatment modalities in this SIPU was balanced between exploratory-expressive (34%), behavioral practice (32%), and educational (15%) methods. Content areas (by percentage of program time spent) included current relationships (44%), life skills (25%), war zone experiences (16%), and PTSD symptoms (11%). These percentages are largely comparable with national means for VA

SIPUs (Fontana et al., 1993), with exceptions being greater emphasis in this program on behavioral practice and current relationships, and less emphasis on PTSD symptoms, consistent with the philosophy of the unit (Johnson et al., 1994).

Treatment Components

Fifteen major treatment components of the program were selected for evaluation. All occurred during the middle phase of the program when presumably group formation and termination issues were least influential. All components were mandatory, and scheduled once a week for an hour unless otherwise noted in the following brief descriptions: *Traumatic Memories Group*—During this 90 minute session, veterans wrote in detail about one traumatic event during their Vietnam service, and then read it to and discussed it with the group. *Anger Management*—A structured presentation and practice of anger management skills. *Community Lecture*—Lecture series presenting the program philosophy, called the Ten Paths, on the impact of trauma on the veterans' lives and methods of coping with PTSD. *Finding Your Father*—Each veteran described his relationship to his father over the course of his life, and particularly how it was affected by his military service. *Group Therapy*—Interpersonally-oriented group therapy focusing on the veterans' existential dilemmas in relation to their future. *Family Issues*—Discussion group focusing on family problems of the veterans. *Relaxation*—Progressive muscle relaxation and guided imagery was used to teach the veterans self-soothing skills. *Journal Group*—Each veteran read from his journal about feelings and reactions he experienced during the week. *Art Therapy Group*—Veterans used a variety of art materials to express their feelings about their traumatic experiences and current struggle with their illness. *Drama Therapy Group*—In this group, improvisational movement and role-playing was used to evoke spontaneous scenes of interest to the veterans, concerning either the past or present. *Video Group*—This group involved the production of a humorous set of skits about life on the unit, which was videotaped and then shown in the community meeting. *The Vietnam Play*—Rehearsals for an original play about their Vietnam experience or coming home from Vietnam, directed by a staff drama therapist. *Workshop*—Veterans worked on various woodworking, leather, and constructional projects in an occupational therapy workshop. *Community Service*—Veterans volunteered in local soup kitchens and inner city schools as big brothers, for four hours on one afternoon a week. *Week in Review*—An open discussion concerning the manner in which the veterans had

worked with each other and with the staff during the week, with particular emphasis on authority issues.

Categorization of Components

For the purposes of reducing the complexity of the data, these groups were categorized according to four different dimensions, based in part on an earlier study (Johnson, Rosenheck, & Fontana, 1997, see this Section). *Content* was dichotomized according to whether Vietnam or combat experience were explicitly discussed in the group [Vietnam/NoVN]. The *Purpose* of the activity was categorized according to whether the group intended to explore the veterans' feelings about a topic [Exploratory], to provide the veterans particular knowledge or skills [Educational], or to give the veterans practice in exercising specific skills in action [Behavioral Practice]. *Modality* was dichotomized according to whether the veterans sat in chairs and verbally discussed a topic [Verbal], or engaged in bodily movement or action, such as role-playing or working with materials [Action]. Finally, *Attentional Focus* was categorized according to whether the veterans were asked to focus their attention primarily on their inner thoughts [Internal], on interactions with other members in the group [Interpersonal], or on a task external to themselves and other group members [External]. Each component was rated on these categories by three members of the senior clinical staff. Interrater reliabilities for each categorization were moderate (all $r_s > .80$). Differences were resolved by consensus.

Measures

The Psychological State Questionnaire (PSQ) was developed for this study, and consisted of 15 items scored on a 5-point Likert scale (1 = not at all, 2 = a little, 3 = some, 4 = a lot, 5 = very much so). Patients were asked: How are you feeling right now? Items included two re-experiencing items (i.e., thoughts about Vietnam, negative thoughts), four avoidance items (i.e., numb, body pain, close to people, enjoyment), six hyperarousal items (i.e., physically relaxed, angry, on guard, anxious, trouble concentrating, inner calm), and three items related to depression (i.e., depressed, tired, happy). Negatively connoted items were reversed for scoring purposes, so that higher scores refer to more positive feeling states. Estimates of effectiveness for each treatment component were gathered by a Treatment Components Effectiveness Scale (TCES), administered at discharge, in which veterans rated each treatment component on a 4-point Likert scale (1 = very unhelpful, 2 = unhelpful, 3 = helpful, 4 = very helpful). Both

of these scales were developed for the purposes of this study, and their psychometric properties are not established.

In addition, the Combat Exposure Scale (CES, Keane et al., 1989), the Mississippi PTSD scale (MISS, Keane, Caddell, & Taylor, 1988), and the Clinician-Administered PTSD Scale (CAPS, Blake et al., 1990), were administered at admission by research assistants not associated with the clinical program.

Data Analysis

Due to a small N and large number of variables, data reduction strategies were used: components were categorized by Content, Purpose, Modality, and Attentional Focus; only Total Score was used from the Psychological State Questionnaire; and the PTSD measures (CES, CAPS, and MISS) were dichotomized into high and low subgroups, based on median splits (cutoff scores: CES (31.5), MISS (140), CAPS (4.20)). Session effects were analyzed by paired t -tests for each treatment component. Two-factor repeated measures ANOVAs were used to compare PSQ scores for component categories across timepoint, as well as PTSD subgroups across timepoint. Pearson product-moment correlation coefficients were used to compare PTSD measures with change scores on the PSQ. Due to multiple comparisons, the significance value was set at $p < .01$.

Results

First Cohort

Scores on the PSQ for each component are listed in Table 1, in descending order of reported improvement. Community Service, Workshop and Art Therapy were the most effective in reducing negative feeling states in the veterans, and Group Therapy and Traumatic Memories Group increased their distress.

PTSD measures. There were no significant correlations between PTSD symptoms on any measure at admission and overall scores on the PSQ at either timepoint. However, PTSD symptoms at admission did correlate with change scores on the PSQ: veterans with higher levels of PTSD symptomatology at admission generally improved less on the PSQ, MISS: $r(11) = -.65, p < .05$; CAPS: $r(11) = -.62, p < .05$. Two-factor ANOVAs of PSQ Total scores across Timepoint, grouped by High/Low PTSD symptoms

Table 1. Scores on Psychological State Questionnaire for each Treatment Component in the First Cohort ($n = 12$)

Component	Before ^a	After ^a	Change Score ^b	t(df = 11)
Community service	2.72(.62)	3.16(.68)	.44	3.64 ^d
Workshop	2.49(.46)	2.81(.50)	.32	3.82 ^d
Art therapy	2.44(.59)	2.75(.46)	.31	2.89 ^d
Journal group	2.29(.37)	2.56(.46)	.27	2.60 ^c
Drama therapy	2.39(.64)	2.65(.66)	.26	2.40 ^c
Vietnam play	2.20(.63)	2.45(.46)	.25	2.38 ^c
Anger management	2.27(.59)	2.53(.50)	.25	1.88
Family issues	2.29(.42)	2.34(.41)	.05	.74
Week in review	2.24(.49)	2.25(.54)	.01	.16
Video group	2.13(.49)	2.11(.55)	-.02	.16
Finding your father	2.59(.45)	2.52(.47)	-.07	1.01
Relaxation group	2.24(.59)	2.09(.65)	-.15	1.07
Community lecture	2.60(.63)	2.42(.53)	-.18	1.61
Group therapy	2.62(.46)	2.44(.50)	-.18	2.61 ^c
Traumatic memories	2.00(.37)	1.73(.39)	-.27	2.65 ^c
Mean for all groups	2.27(.35)	2.36(.36)	.09	3.23 ^d

^aBased on range from 1 to 5, with higher values representing less distress.^bAll values different by more than .30 from each other are significant at $p < .05$.^c $p < .05$.^d $p < .01$.

based on median splits on the MISS and CAPS, showed significant interaction effects for MISS, $F(1,10) = 15.89$, $p < .002$, and near significant effects for CAPS, $F(1,10) = 5.01$, $p < .03$. This effect was evident in nearly all the treatment components. The Art Therapy group was unique in showing a significant correlation in the opposite direction: improvement was greatest for more symptomatic veterans, especially on the MISS, $r(11) = .65$, $p < .05$. Overall, improvement on the PSQ was not associated with Combat Exposure, $r(11) = -.08$.

Component categories. Table 2 lists the results of two-factor repeated measures ANOVAs on PSQ scores for each component category across timepoint. In the first cohort, Attentional Focus and Modality were significant factors in explaining the variance of veterans' scores across the session. Vietnam Content was also nearly significant. Purpose was not a significant factor. Thus, veterans reported feeling more improvement after participation in groups with an External focus, Action modality, and, secondarily, little Vietnam content.

Treatment effectiveness. On the Treatment Components Effectiveness Scale, completed at discharge, the veterans' ratings for each treatment component were not correlated with their change scores on the PSQ, $r(11)$

Table 2. Two-factor, Repeated Measures ANOVAs on the PSQ for Treatment Component Categories \times Timepoint

Measures Category	First Cohort ($n = 12$)		Second Cohort ($n = 13$)	
	Mean ^a (SD)	Cat. \times Time (<i>df</i>)	Mean ^a (SD)	Cat. \times Time (<i>df</i>)
Content				
High Vietnam	.01(.15)	4.83 ^b (1,22)	-.05(.13)	4.98 ^b (1,24)
Low Vietnam	.15(.15)		.07(.12)	
Purpose				
Exploratory	-.09(.10)	.30 (2,33)	-.09(.11)	2.08 (2,36)
Educative	.04(.26)		.13(.24)	
Behavioral	.09(.17)		.05(.19)	
Modality				
Verbal	-.01(.13)	11.03 ^d (1,22)	-.17(.12)	8.35 ^c (1,24)
Action	.19(.17)		.34(.16)	
Attentional focus				
Internal	-.08(.19)	18.82 ^d (2,33)	-.19(.21)	6.32 ^c (2,36)
Interpersonal	.08(.10)		.07(.14)	
External	.36(.21)		.26(.23)	

^aChange scores are listed here for convenience.^b $p < .05$.^c $p < .01$.^d $p < .001$.

= .04, indicating no relation between immediate treatment effects and the veterans' ratings of benefit at discharge.

Replication on Second Cohort

After completion of the above analyses, the model was tested on a second cohort of 13 veterans, who were treated on the same SIPU 6 months later. All procedures were identical to those used in the first cohort.

Change scores for each treatment component were highly correlated between cohorts, $r(14) = .73$, $p < .01$. The relation between PTSD symptomatology and improvement on the PSQ was in the same direction, but not as strong, as in the first cohort: MISS \times Timepoint, $F(1,11) = 9.07$, $p < .01$, and CAPS \times Timepoint, $F(1,11) = 3.67$, $p < .08$. Interestingly, Art Therapy was again the only treatment component that was more effective for more symptomatic veterans, $r(12) = .51$, $p < .05$. In contrast to the first cohort, veterans in the second cohort who were more symptomatic on the MISS at admission reported higher levels of distress on the PSQ at both timepoints, $F(1,11) = 11.34$, $p < .01$.

Categorical analysis of treatment components received strong replication. Two-factor repeated measures ANOVAs, listed in Table 2, demon-

strated that again Attentional Focus and Modality were significant, and Vietnam Content near significant, factors explaining veterans' improvement in the sessions.

On the Treatment Components Effectiveness scale, veterans' ratings of component effectiveness were uncorrelated with the change scores on the PSQ, $r(12) = .09$, replicating the results of the first cohort.

Discussion

The results of this study indicate that (1) some inpatient treatment components did produce significant reductions in PTSD-related symptoms over the course of one session, (2) these changes were more significant for patients with lower levels of PTSD symptomatology, (3) components with an external attentional focus, action modality, and little Vietnam content produced greater improvement than components with an internal focus, verbal modality, and high Vietnam content; and (4) the art therapy group was unique in producing greater improvement in patients with higher levels of PTSD symptomatology as measured at admission.

This study has a number of limitations. First, generalizability of results is questionable, since sampling occurred for only one session per component, among 25 patients in two cohorts, without controlling for many possible sources of error variance. The effects of different therapists, different treatment environments, or program formats are potentially confounding influences that were not controlled for in this study design. The replication of the major results in the second cohort lends support to these data, but the results of this study should be viewed as highly provisional. Second, the veterans may have had a reporting bias due to the belief that program leadership was using these ratings to evaluate the therapists. Third, the study does not address whether the reported changes in psychological state have any bearing on ultimate outcome or efficacy. Indeed, the lack of correlation between the short-term effects and the self-report measure of efficacy at discharge underscores this possibility. Verbal, internally-focused groups such as Traumatic Memories Group may produce temporary distress that later lead to improvement in the patients' clinical condition, whereas components such as Community Service that initially produce a calming effect may distract the patient from internal distress, thereby delaying or hindering clinical progress. Nevertheless, these short-term effects may be clinically meaningful. For example, in this study, 17 out of 25 veterans felt more distressed after the Traumatic Memories Group, while 19 out of 25 felt less distressed after Community Service. Our clinical experience is that veterans are aware of these effects and report them to staff. Thus, outcome

studies are needed which specifically address the relation between short-term and long-term effects of these treatment types.

Nevertheless, the study does raise some interesting hypotheses about the immediate effects on the psychological states of veterans across a variety of interventions. First, though some components were effective in reducing symptoms in one session, this effect was much reduced among more severely ill veterans, some of whose symptoms even worsened as a result of the sessions. As expected, more severely distressed veterans appear to be less influenced by treatment interventions.

The study also suggests that the attentional focus, expressive modality, and secondarily, Vietnam content may be important determinants of patient response to these treatments. The fact that greater symptom reduction took place in components that involved physical action, an external focus, and little Vietnam content suggests the operation of *distraction* as a therapeutic element (Selye, 1980). Selye (1980) noted that when an organism is stressed disproportionately in one part, distraction is effective because it spreads the stress across the entire organism; whereas, when the entire organism is stressed, rest is needed. Distraction techniques are the basis for a number of cognitive-behavioral interventions such as thought-stopping, physical exercise, and countering techniques (McMullin, 1986). Thus, the release of tension occasioned by physical activity, as well as the turning of veterans' attention away from their inner thoughts and traumatic experiences, may be the basis for some treatment components' short-term therapeutic effects. In contrast, these techniques may be viewed from insight-oriented or exposure-based perspectives as supporting avoidant coping styles that provide only short-term relief. The differences between rehabilitative and insight-oriented approaches roughly parallel these differences in emphasis on distraction versus exposure.

It is also possible that gender-based preferences of male veterans for physical activity over verbalization, or focus on external tasks over introspection, may have contributed to these results. Studies comparing men and women would help clarify this question.

Interestingly, certain groups, notably those involving the arts media such as art therapy, bibliotherapy, and drama therapy, did involve Vietnam-related material, in comparison with recreational or rehabilitative activities such as the Workshop or Community Service, which had little Vietnam content. The creative arts therapies have the characteristic of utilizing action-oriented modalities, and yet also containing psychological content such as traumatic themes, thereby combining elements of both distraction and exposure (Feldman, Johnson, & Ollayos, 1994; Golub, 1985; Greenberg & van der Kolk, 1987; James & Johnson, 1996; Johnson, 1987; Simonds, 1994). A number of these groups (i.e., art therapy, journal group,

drama therapy, and the Vietnam Play) produced significant short-term symptomatic improvement in this study. Arts media, by shifting the focus of attention from internal states to interpersonal or external foci, may allow traumatic material to be processed without some of the negative effects of verbal, introspective interventions. It is possible that this process may also have contributed to the art therapy group's success in lowering distress among the more symptomatic veterans. Further inquiry into these approaches seems warranted.

The SIPU is representative of the full-scale treatment effort of the therapeutic milieu philosophy. Discrepant approaches, based on diverse theoretical formulations, are combined to provide a comprehensive and balanced treatment program. Components that focus on trauma and expression of affect may be followed later in the day by components that use physical release or distraction. Whether this integration of treatment approaches within one program increases its overall effectiveness, or whether such design leads to mutual interferences which undermine its efficacy, is not known. Only outcome studies measuring longer term effects of programs differing in heterogeneity of approach could address this question. As inpatient, outpatient, and day treatment programs are being designed for veterans suffering from combat-related PTSD, the question of efficacy of treatment approach remains a critical one. The results of this study suggest that the relative efficacy of rehabilitation-oriented programs based on modalities such as occupational therapy, community service, and the creative arts therapies, versus psychotherapeutic programs based on verbal and introspective group therapies, deserves to be empirically tested.

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